Minutes from non-point workgroup meeting of September 15, 2006

The meeting was held at the Piedmont Regional Office in Glen Allen, Virginia and commenced at 9:30 AM. The following persons were in attendance:

Scott Macomber	Angler Environmental
Charlie Bridges	Philip Morris
John Sheehan	Aqualaw
Chris Hively	Culpeper County
Ken Carter	NRCS
Shannon Varner	Troutman Sanders
Brent Fults	ESS
Scott Reed	ESS
Jack Frye	DCR
Bill Keeling	DCR
Rick Parrish	Southern Environmental Law Center
Tony Banks	Virginia Farm Bureau
Suzan Bulbulkaya	Chesapeake Bay Commission
Mike Gerel	Chesapeake Bay Foundation
Sharon Conner	Hanover-Caroline SWCD
Bill Street	James River Association
Allan Brockenbrough	DEQ
Kyle Winter	DEQ
Brian Smith	Ducks Unlimited
Brian Noyes	Colonial SWCD
Paul Davis	Virginia Cooperative Extension/Colonial SWCD
Jim Wallace	Colonial SWCD
Kurt Stephenson	Virginia Tech
Joe Battiata	Contech
Ed Overton	VASWCD
Russ Baxter	DCR

Kyle Winter of DEQ discussed the recent approval of the nutrient trading regulation by the State Water Control Board and reviewed the conditions in the Watershed General Permit pertaining to offsetting new and expanded discharges of nutrients. *These conditions can be found in Attachment A to the minutes of this meeting.* Mr. Winter proposed a timetable in which this meeting would be used to discuss issues of concern that should be addressed in implementation guidance. The October 20th workgroup meeting will be devoted to a discussion of the first draft of the guidance, and the November 7th workgroup meeting will be devoted to refining a version of the guidance that would be suitable for release for public comment.

Two questions were asked regarding the regulation at this time; the first was how local water quality impacts would influence trading. In areas where a local water quality impairment can be attributed to nutrients in the watershed, the non-point reductions acquired to offset new and expanding discharges must be achieved upstream of the impact.

The second question was whether the proposed guidance would address payment by the Water Quality Improvement Fund for non-point nutrient reductions. The enabling legislation specifically tasks DEQ with applying monies received for compliance credits to either point or non-point reductions in the watershed in which the credits are to be applied. It would be reasonable for the review and approval process that will be developed for non-point reductions that are to be paid for by the permittee, to be applicable for non-point reductions that are to be paid for by the Commonwealth.

Mr. Winter also discussed the number of new and expanded facilities that could potentially need to offset discharges in 2007; approximately 50 facilities might fall into the "new and expanded" category, with perhaps 25 of them able to install sufficient treatment to completely avoid additional nutrient loads. The offset needs for the remaining facilities would come to about 140,000 pounds per year of nitrogen (to put this in context, planting an early cover crop above the fall line achieves between 2 and 4 pounds per acre per year nitrogen reduction), and 18,000 pounds per year of total phosphorus (to put this in context, converting from conservation tillage to continuous no-till above the fall line achieves between 0.35 and 0.85 pounds per acre per year in phosphorus reduction). The above figures do not account for discharge delivery factors, nor do they account for the 2:1 offset requirement for non-point sources.

While the figures quoted above appear to indicate an immediate and significant demand for offsets, they are most likely greatly overestimating the actual demand, based on the following variables:

- Expanding facilities do (or do not) install sufficient treatment to partially offset the additional loads;
- Whether (or not) these facilities discharge at the maximum design flow in 2007 (it is certain that several facilities will not discharge at all in 2007);
- Facilities are (or are not) able to purchase allocations from significant dischargers with available allocation room, or from the Water Quality Improvement Fund, and
- Facilities opt (or opt not) to employ reclamation and reuse to minimize the loads discharged.

Having said that, the scenario for offsets should be considered in four time windows:

- 2007-2008 – some demand, most of which should be met without resorting to non-point offsets
- 2008-2013 - during tributary wide schedule of compliance – demand should increase in short term as demand for sewerage services (briefly) outpaces treatment capacity of facilities under construction.
- 2013-2025 - demand will be dependant on number of new and expanding facilities. Most significant dischargers should have adequate capacity to provide offsets.
- 2025 and after – as significant dischargers reach capacity with their upgraded plants, any room under the load cap will probably be retained as a hedge for compliance (and possible sale as compliance credits); demand for offsets will increase dramatically.

If this forecast is correct, the appropriate time for facilities to lock up the BMPs used for future offsets is now. Land conversion from agricultural and forest land to developed land will reduce the acreage available for non-point BMPs dramatically between now and 2030; the availability of offsets in future years will influence whether communities can attract industries and expand their tax bases.

Russ Baxter of DCR then discussed the DCR offset concept paper, *which can be found in Attachment B to the minutes of this meeting*. Mr. Baxter noted that the efficiency of vegetative (particularly forested) buffers would "grow" as the plants did, and that this would have to be accounted for. He also emphasized that the baseline practices must all (as applicable) be implemented farm-wide in order for credits to be generated.

Jack Frye noted that the practices emphasized in this concept paper reflected those in the current cost-share program.

Several questions were raised in response to this presentation:

- whether land retirement would be an option;
- reforestation (land conversion, with reductions achieved above and beyond what would reasonably be expected under the tributary strategy had the land remained in production in its current use);

- whether the soil condition index could be used as part of a performance-based (as opposed to a practice-based) program.
- In some circumstances, the Chesapeake Bay Protection Act is more stringent than is the tributary strategy, and "beyond baseline" would be harder to achieve for farms subject to the CBPA. It was acknowledged that some calculations would have to be done on a case-by-case basis.
- There may be a lot of variables between tracts that would have to be considered when calculating reductions (i.e., calculating runoff from a field that is essentially flat)

It was acknowledged that some farm operations might not be able to avail themselves of the offset program, and that any BMP installed would have to have an assigned removal efficiency (a.k.a. load reduction) that would be recognized by DEQ and DCR.

Bill Keeling of DCR then discussed the concept for calculating reductions achieved by common BMPs. He noted that this concept relied on the assumptions in the Chesapeake Bay Program model version 4.3, with some modifications. Model version 5.0 will shortly be forthcoming, and if a TMDL is performed for the Chesapeake Bay, it will be with that model. This model should provide much better resolution.

The values presented on the sheet provided by Mr. Keeling were for individual BMPs and did not account for them being used in a "treatment train". He emphasized that the handout represented a way of depicting reductions and the individual numbers shown should not be taken at face value as authoritative. The workgroup agreed that it was more important to settle on a process for determining reductions than to reach agreement on the particular numbers at this time.

When asked how faithfully the reductions should imitate the reduction efficiencies used in the Chesapeake Bay model, Mr. Keeling replied that it depended on the assumptions employed and desired applications.

One question was how changes in the Chesapeake Bay model would affect this approach; going to version 5.0 would impose some changes in resolution and in efficiency determinations. Remember that the model is predictive, not prescriptive. If the next phase of the model has different numbers, it might affect how facilities purchase offsets, but the work group agreed that this was something that could be accounted for as the process developed over time. Whatever procedure is adopted should be able to account for better information, while providing some long-term certainty for permittees.

Mr. Winter reiterated the general concept of determining load reductions:

- Presumed BMP efficiencies are derived from the Chesapeake Bay Model;
- BMP design criteria should be derived from commonly implemented BMPs (such as described in DCR's paper);
- Need to account for site-specific
  - Land use;
  - Soil type;
  - Degree of state/federal funding used in current level of BMP implementation, and
  - Applicability of regulations to site

A brief discussion followed about what's been done in other states, with the Idaho trading program cited as an example. It should be noted that while Idaho has very explicit (albeit clearly understandable) point-nonpoint trading policies in place, they had no farmers sign up for the program in the first 4 years of its existence – apparently due to a lack of demand for offsets.

A question was raised about how to calculate offsets when multiple regulatory programs might influence the "threshold"; the following matrix was outlined to propose one way of doing this:

BMP CBPA requirement Funding requirement Tributary Strategy "Site specific baseline"

Whatever is the most stringent of the requirements for a given BMP would have to be the baseline; it's not to say that federal or state funding could not be used to fulfill less stringent requirements, nor is it to say that combinations of practices could not reduce the requirements for a single given practice.

It was asked whether this concept would account for secondary benefits (carbon sequestration), and whether the reduction concept was overly conservative. Would this concept penalize landowners who are currently achieving synergy with treatment trains? It was again asked whether a performance based calculation (such as the soil conditioning index) would be an acceptable surrogate for a table listing pound reductions for a given BMP.

The workgroup agreed that the guidance should have a means for review and approval of alternate removal efficiency calculation methods, and for review and approval of innovative BMPs.

There was also a question as to whether agreement should be reached on discrete reduction values by individual BMPs before analysis of multiple BMPs was attempted.

One comment was that the cost-share program was already moving toward suites of BMPs that are intended to be implemented for longer periods of time. The response was that the baseline contemplated in DCR's paper is a suite of BMPs.

The remaining discussion addressed specific issues of concern that should be addressed in the proposed guidance:

- The CBPA is sometimes more restrictive, sometimes less (than other requirements). How would this be accounted for without some site-specific analysis (see the response earlier on this page)?
    - What format would be used in site-specific analyses?
    - Who would perform the calculations, and who would verify them?
    - Who pays for the analysis?
- How would we account for currently implemented BMPs that are either undocumented or under-documented?
- How would potential reductions at a given site be calculated?
- How do we maintain flexibility over the long term to account for on-the-ground conditions (changes in crop rotation, harvesting of cover crop, force majeure)?
- When would the BMPs be verified, and by whom?

(At this point, it was proposed that the guidance contain a table of acceptable BMPs, including definitions of the tributary strategy threshold, the practice specifications (e.g., SL-8B), the qualifications of the plan

developer/inspector, and the timing/frequency of inspections. It was further proposed that inspection check sheets for each specified practice be developed for this guidance.)

- Regarding BMPs in developed areas, how would we verify that a community is meeting the programmatic baseline? Could this be made parcel-specific (think of a conscientious developer in a town that is either apathetic or hostile to development)? The answer to this was that communities will be considered analogous to farms – the quality of the contiguous operation will dictate whether the baseline is met.

- Could the SARF (strategy allocation reduction factor) be phased in gradually over time? The initial requirement may discourage landowners in developed areas from committing themselves.

- What financial assurance and documentation will be required of aggregators (nutrient bankers)?

- How would we protect agricultural practices against conversion to forest/wetlands? Tenant farmers are vulnerable to this.

- How would other agricultural activities (nurseries, vegetable growing operations) be accounted for?

The discussion turned to what needed to be addressed in the guidance:

- Alternative quantification:
    - Methodology
    - Protocols/baseline methods
    - How to account for degree of uncertainty
    - Minimum performance standards
- Procedural filters/screening
    - How to identify truly worthy proposals
    - CSP uses a "yes/no" questionnaire to help potential landowners self-select or self-disqualify
    - This might also be good for screening WQIF proposals
- Standards for aggregators
- Inspections
    - Who does them?
    - Who has the burden of proof (aggregator or permittee, permittee cannot delegate compliance liability)
    - Minimum credentials of inspector
- How to account for multiple benefits (carbon sequestration, wetlands)

  - When is this acceptable? When is it not acceptable?

- Who are the parties to the agreement? Who is obliged to comply, the landowner or the farm operator?

- Recordkeeping – who's liable for fertilizer and planting records, for example?

- Does CREP participation preclude establishment of a bank? Why/why not? Can the guidance provide examples?

- How to manage situation where a TMDL is developed after the contract is signed to implement the BMPs; following scenarios are possible:

  - New hot spot

  - Load allocation more stringent than offset baseline

After reiterating the guidance development process and opening the floor to public comment (none received), Mr. Winter adjourned the meeting.

Part I.B. of 9 VAC 25-820-70

Acquisition of Waste Load Allocations.

Waste load allocations required by this section to offset new or increased delivered total nitrogen and delivered total phosphorus loads shall be acquired in accordance with this section.

1. Such allocations may be acquired from one or a combination of the following:

   a. Acquisition of all or a portion of the waste load allocations from one or more permitted facilities, based on delivered pounds by the respective trading parties as listed by the Department.

   b. Acquisition of nonpoint source load allocations, using a trading ratio of two pounds reduced for every pound to be discharged, through the use of best management practices that are:

      (i) Acquired through a public, or private entity acting on behalf of the land owner;

      (ii) Calculated using best management practices efficiency rates and attenuation rates, as established by the latest science and relevant technical information, and approved by the board;

      (iii) Based on appropriate delivery factors, as established by the latest science and relevant technical information, and approved by the board;

      (iv) Demonstrated to have achieved reductions beyond those already required by or funded under federal or state law, or by the Virginia tributaries strategies plans, and

      (v) Included as conditions of the facility's individual Virginia Pollutant Discharge Elimination System permit; or

   c. Until such time as the Board finds that no allocations are reasonably available in an individual tributary, acquisition of allocations through payments made into the Virginia Water Quality Improvement Fund established in § 10.1-2128; or

   d. Acquisition of allocations through such other means as may be approved by the Department on a case-by-case basis.

2. Acquisition of allocations is subject to the following conditions:

   a. the allocations shall be generated and applied to an offset obligation in the same calendar year;

   b. the allocations shall be generated in the same tributary;

   c. such acquisition does not affect any requirement to comply with local water quality-based limitations, as determined by the board;

   d. the allocations are authenticated (i.e., verified to have been generated) by the permittee as required by the facility's individual Virginia Pollutant Discharge Elimination permit, utilizing procedures approved by the Board, no later than February 1 immediately following the calendar year in which the allocations are applied;

e. if obtained from a permitted point source, the allocations shall be generated by a facility that has been constructed, and has discharged from treatment works whose design flow or equivalent industrial activity is the basis for the facility's waste load allocations, and

f. no later than June 1 in the year prior to the calendar year in which the allocations are to be applied, the permittee shall certify on an exchange notification form supplied by the Department that he has acquired sufficient allocations to satisfy his compliance obligations. The permittee shall comply with the terms and conditions contained in the exchange notification form submitted to the Department.

3. Priority of Options. The Board shall give priority to allocations acquired in accordance with subdivisions B.1.a and B.1.b. of this section. The Board shall approve allocations acquired in accordance with subdivisions B.1.c and B.1.d of this section only after the owner or operator has demonstrated that he has made a good faith effort to acquire sufficient allocations in accordance with subdivisions B.1.a and B.1.b, and that such allocations are not reasonably available taking into account timing, cost and other relevant factors. Such demonstration may include, but not be limited to, providing a record of solicitation, or other demonstration that point source allocations or nonpoint source allocations are not available for sale in the tributary in which the permittee is located.

4. Annual allocation acquisitions from the Water Quality Improvement Fund. The cost for each pound of nitrogen and each pound of phosphorus shall be determined at the time payment is made to the WQIF, based on the higher of (i) the estimated cost of achieving a reduction of one pound of nitrogen or phosphorus at the facility that is securing the allocation, or comparable facility, for each pound of allocation acquired; or (ii) the average cost, as determined by the Department of Conservation and Recreation on an annual basis, of reducing two pounds of nitrogen or phosphorus from nonpoint sources in the same tributary for each pound of allocation acquired.

June 30, 2006 DISCUSSION DRAFT

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Nutrient Credit Exchange – Framework for Creation of Nonpoint Source Offsets/Credits

Table of Contents

Introduction

The Chesapeake Bay Nutrient Credit Exchange Program legislation enacted in 2005 establishes a nutrient credit exchange program for point sources within the Chesapeake Bay watershed. In order to maintain the total nutrient loading (nitrogen and phosphorus) limits established by the State Water Control Board in each of the Chesapeake Bay tributary basins, new or expanded facilities that discharge nutrients must **offset** additional nitrogen and phosphorus loads. There are four options for obtaining offsets/credits established by the Code (§62.1-44.19:15 B.):

1. Acquisition of offsets/credits from another point source in same tributary
2. Acquisition of offsets/credits from nonpoint source reductions which are greater than required by federal or state law or needed to meet the tributary strategies and located within the same tributary
3. Allocations obtained by other means approved by DEQ
4. Payments into the Water Quality Improvement Fund (WQIF) under certain conditions

This paper proposes a framework for determining eligible offsets from agricultural lands, developed lands and land conversions.

The Code of Virginia requires that offsets cannot be generated from practices unless they are "beyond those already required by or funded under federal or state law, or Virginia Tributaries strategies plans." (Section 62.1-44.19:15 B. 1. b.) Therefore, the framework proposed in this paper seeks to set baseline levels sufficient to meet the requirements of the Code.

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SECTION I: FRAMEWORK FOR GENERATING OFFSETS FROM AGRICULTURAL LANDS

A. Overview:

The approach outlined in this section is a baseline best management practice (BMP) based implementation approach that will require the establishment of specific BMPs prior to generating offsets. Under this approach, a suite of conservation practices must be in place before offsets can be generated from an agricultural operation. Offsets would then be generated by practices, or enhancements to existing practices, that go beyond the proposed baseline.

B. Proposed Baseline Agricultural Conservation Practices and Practices Beyond Baseline for offsets/credits

The following baseline conservation practices are proposed on agricultural lands where applicable to the agricultural operation, and if properly implemented, are presumed to achieve the tributary strategy levels of implementation.

- Conservation Tillage
- Cover Crops
- Livestock stream exclusion
- Nutrient Management
- Riparian buffer
- Permanent Vegetative Cover on Critically Eroding Areas[1]

The following are descriptions of the baseline practices and the enhancements to those practices that would be available to generate offsets or credits.

Practice: Conservation Tillage

Baseline – Implementation of a minimal tillage system that results in an average crop residue cover of 30% over the expected crop rotation or the use of a minimal tillage system utilized such as ridge till, mulch till, or strip till.

Beyond Baseline – Implementation of a continuous no till system meeting the specifications of the DCR cost share manual of a minimum of 60% residue cover on all of the acreage utilized to calculate the reduction or compliance with DCR cost share practice SL-15A.

Practice: Cover Crop

Baseline – Planting small grain cover crops to meet the required standard planting date and other specifications for DCR cost share practice SL-8B[2] with limited nutrient application to cover crop to sustain cover crop growth and uptake.

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[1] This practice is incorporated as a baseline practice, however there is no corresponding "beyond baseline."

[2] Specifications for SL-8B can be found at: http://192.206.31.57/agbmpman/toc.pdf (Virginia Agricultural BMP Manual)

June 30, 2006 DISCUSSION DRAFT

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Beyond Baseline – Planting a small grain cover crop to meet the early planting date and other specifications for DCR cost share practice SL–8B. No nutrient application to the cover crop. Planting of small grain crop following annual legume in crop rotation.

Practice: Livestock Stream Exclusion

Baseline – Exclusionary fencing to restrict livestock access to streams with alternative watering sources provided and allowance for hardened stream crossings with a minimum riparian buffer establishment width of 35 feet.

Beyond Baseline – Exclusionary fencing to restrict livestock access to streams with alternative watering sources provided and allowance for hardened stream crossings and establishment of a streamside vegetative buffer of greater than 35 feet width. Offsets may be generated for the width of buffer beyond 35 feet. Practice must meet DCR cost share practice WP-2[3] specifications.

Practice: Nutrient Management

Baseline: Implementation of a nutrient management plan written by a certified nutrient management planner and that meets the standards set in the Department of Conservation and Recreation's Nutrient Management Training and Certification Regulations, 4 VAC 5-15-10 et seq.

Beyond Baseline:

1. Implementation of a minimum 15% reduction in nitrogen rates from the quantity recommended in the nutrient management plan. (This practice is often referred to as "yield reserve."
2. Implementation of a precision agriculture system for nutrient management application to include the use of a GPS system, yield maps and variable application rate controllers on equipment to ensure precision nutrient applications consistent with a nutrient management plan within each subfield management zone.

Practice: Riparian Buffer

Baseline – Maintenance of a minimum width vegetative buffer on pasture and cropland of at least 35 feet in accordance with Natural Resource Conservation Service (NRCS) standards. In "Tidewater Virginia" (those counties, cities and towns which must comply with the Chesapeake Bay Preservation Act (CBPA)) additional buffer width may be required to meet applicable CBPA requirements.

Beyond Baseline - Establishment of a vegetated riparian buffer on pasture and cropland exceeding 35 feet and meeting NRCS standards or newly established forested buffers of a minimum average width of 35 feet. In "Tidewater Virginia" widths must extend beyond CBPA requirements. Offsets may be generated for the width of buffer beyond the minimum required.

[3] Specifications for WP–2 can also be found in the BMP manual referenced above

June 30, 2006 DISCUSSION DRAFT
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C. Implementation Process for Agricultural Offsets

The following standards are proposed for determining eligible operations:

- The agricultural operation and all contiguous acres under the control of the farm operator proposed for participation in the offset/credit program within "Tidewater Virginia" are in compliance with the applicable provisions of the Chesapeake Bay Preservation Act.

- All applicable baseline BMPs must be installed on all contiguous acres within an agricultural operation under the control of the farm operator before allowing any reductions for individual practices beyond baseline for offsets/credits.

- Offsets may be generated by an agricultural producer for practices previously installed on the agricultural operation as long as the baseline practices are currently in place and properly maintained and managed to applicable (state or NRCS) specifications.

- Once applicable offsets/credits are identified for individual agricultural operations, the permittee must verify the offsets/credits on a form developed jointly by DCR/DEQ and submitted for certification by DEQ.

- Applicable offsets/credits will become part of a point source facility's NPDES permit. The permittee will be responsible to provide annual verification, acceptable to DEQ that the baseline BMP practices are functioning according to applicable standards and specifications.

- **SECTION II: FRAMEWORK FOR GENERATING OFFSETS FROM DEVELOPED LANDS**

A. Overview

Determination of a baseline for developed lands needed to meet the tributary strategy and other state and federal laws and permits is more complicated and complex than agricultural lands due to more extensive regulatory requirements and the wide variety of land uses in developed areas. This situation makes a BMP baseline approach such as that used for agricultural lands less appropriate for development lands.

Therefore, instead of a strict BMP baseline, a "programmatic baseline" is recommended as a baseline that must be in place prior to generating offsets from developed lands in a given locality. Under this framework, offsets could be generated only in those localities that meet the proposed programmatic baseline as follows[4]:

- Jurisdiction's program must be determined by DCR to be consistent with the erosion and sediment control law (ESC)
- Jurisdiction's program must be determined by DCR to be consistent with applicable stormwater management program (SWM)
- Jurisdiction must be in compliance with applicable Municipal Separate Storm Sewer (MS4) permit requirements

[4] Determinations by DCR will be based on findings by the Board of Soil and Water Conservation or the Chesapeake Bay Local Assistance Board

June 30, 2006 DISCUSSION DRAFT

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- Jurisdictions within the statutorily defined "Tidewater Virginia" must be found consistent with Chesapeake Bay Preservation Act (CBPA) requirements.

B. Offset Generation from Developed Lands

- Implementation of urban nutrient management programs with the permittee certifying nitrogen and phosphorus loading reductions subject to verification by DEQ.

- Enhancement of existing retention and detention stormwater basins provided such basins are functioning as designed and approved by the local authority. Over-sizing of retention basins to increase the volume of water held will not be considered an enhancement of an existing BMP. The permittee must certify loading reductions subject to verification by DEQ.

- Impervious cover reduction in existing urban areas and installation of stormwater controls with reduction estimates certified by the permittee subject to verification by DEQ.

- Urban stormwater and watershed retrofit projects in existing developed areas that provide for enhanced stormwater management, stream restoration and load reductions with permittee certification of reductions subject to verification by DEQ.

- Wetland restoration projects, beyond any required by state or federal law, that create new wetlands or enhance the pollutant reduction capabilities of existing wetlands with certifications by the permittee of estimated reductions subject to verification by DEQ.

- Shoreline stabilization or restoration activities that result in nutrient reductions with reductions certified by the permittee subject to verification by DEQ.

- Retrofit of existing septic systems with nutrient removal capacity with reductions certified by the permittee subject to verification by DEQ.

C. Implementation for Developed Lands Offsets

- DCR will inform DEQ regarding compliance status of individual localities with applicable ESC, CBPA, SWM and MS4 requirements and frequently update this information. Permittees seeking offsets can review this information to determine if baseline requirements are met within a locality.

- Once primary locality baseline requirements are met, permittees needing offsets/credits must verify that the practices/programs proposed as offsets/credits exceed the baseline requirements and submit the proposed offset/credits to DEQ for certification.

- DEQ and DCR will jointly develop verification procedures for developed lands offset/credit applications submitted by permittees and certify on a registration form developed jointly by DCR/DEQ the level of offsets/credits attributable to a proposed application.

June 30, 2006 DISCUSSION DRAFT

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- In certifying allowable offsets/credits, DCR will estimate the reductions from the proposed practices or programs and then will apply a strategy allocation reduction factor (SARF) to the estimated reductions to address the portion of the practices/programs which are needed to meet the tributary strategies and that which can be considered to be above the requirements of the tributary strategies. As the tributary strategy input deck calls for BMP practices to be installed and maintained on 74% of urban/suburban lands, the SARF will be a multiplier of 0.26 of the reductions generated, with 0.74 of the reductions attributable to meeting the requirements of the tributary strategy.

- The permittee will be responsible to provide annual verification, acceptable to DEQ, that the BMP offsets are in place and functioning according to applicable standards and specifications or the standards established for program level practices developed by DCR. Practices generating offsets/credits must be maintained for the duration of the permit period.

SECTION III: FRAMEWORK FOR OFFSET GENERATION FROM LAND CONVERSION

A. Overview

Land conversion practices which result in a reduction of pollutant loadings from the previous land use could also be considered an eligible area for nutrient offsets. Many land conversion practices have already been accounted for as part of projected land use loadings for 2010 versus 2002 land uses and as part of the reductions necessary for achievement of the tributary strategies. These include conversion of agricultural and urban lands to riparian buffers, reforestation of agricultural, urban and mixed open lands, conversion of agricultural and other lands to wetlands. A critical component to any such actions is determination of definable nutrient reductions achieved through the conversion.

B. Land Conversion offsets/credits Administrative Procedures

- All conversions proposed for offsets/credits must certify nutrient reductions for verification by DEQ.

- In determining nutrient reductions from conversions, the existing land use loading should be based on optimum BMP controls being installed for that land use so that inflated load reduction estimates from the conversion are not generated if the existing land use is not meeting baseline requirements. This would, in effect, mean that the land proposed for conversion meet "tributary strategy requirements" as required by the Code.

- Load reductions generated must be consistent with loading assumptions utilized within the Chesapeake Bay Program watershed model.

- Land conversion of existing developed lands to less intensive uses such as forest or parkland are eligible for offsets with verification by the permittee estimated reduction in loadings subject to certification by DEQ. Converted land must be protected by permanent easement or fee simple purchase. Converted land must meet baseline practices described in this paper for agricultural and developed lands.

- The permittee will verify and DCR will review proposals for land conversion practices and certify acceptable credits/offsets on a form developed jointly by DCR/DEQ.